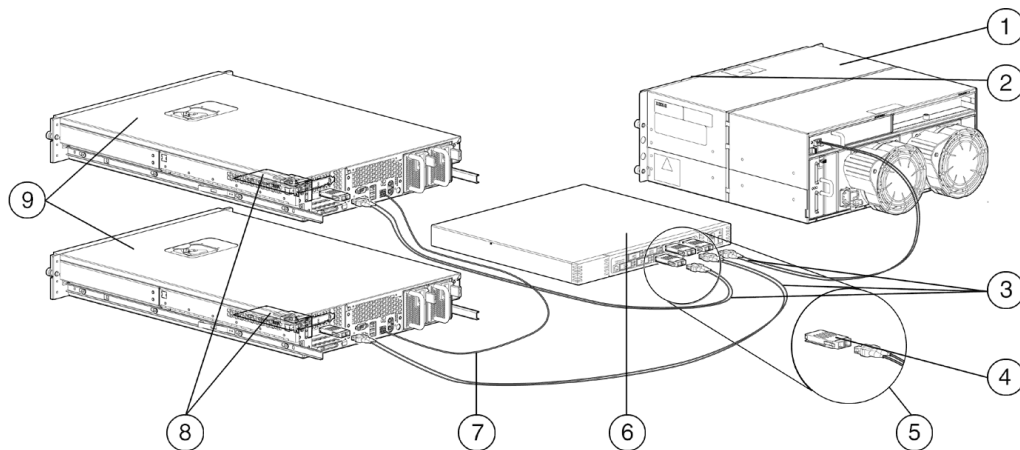


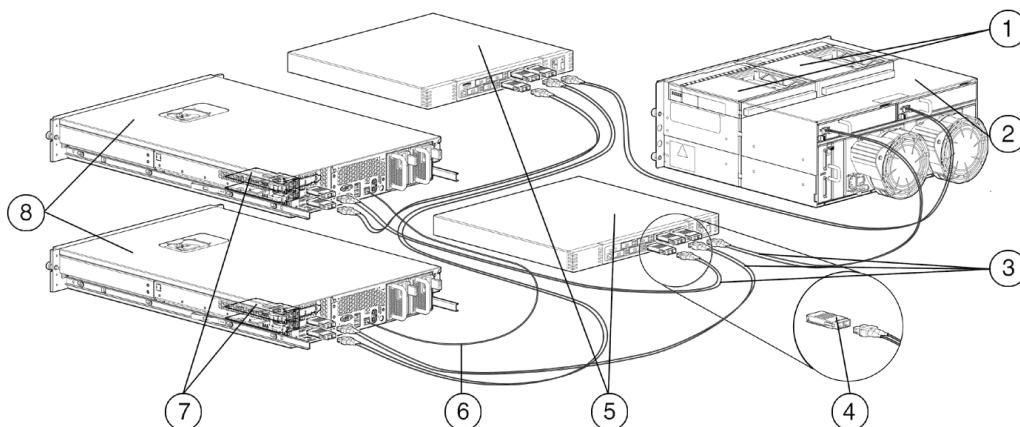
Overview

ProLiant DL F100 Integrated Cluster Solutions and Non-Integrated Cluster Bundle Configurations



- | | |
|---|---|
| 1. MSA1000 | 6. Fibre Channel Interconnect #1 and #2 |
| 2. Smart Array Controller | 7. Ethernet "HeartBeat" Loop |
| 3. Multi-Mode Fibre Channel Cables | 8. Host Bus Adapters |
| 4. Gigabit Interface Convertors (GBICs) | 9. ProLiant Servers #1 and #2 |
| 5. Small Form Factor Fixed Transceivers (SFF) or Small Form Factor Pluggable Transceivers (SFP) | |

ProLiant DL F200 Integrated Cluster Solutions and Non-Integrated Cluster Bundle Configurations



- | | |
|---|---|
| 1. Smart Array Controller | 5. Fibre Channel Interconnect #1 and #2 |
| 2. MSA1000 | 6. Ethernet "HeartBeat" Loop |
| 3. Multi-Mode Fibre Channel Cables | 7. Host Bus Adapters |
| 4. Gigabit Interface Convertors (GBICs), SFP or SFF | 8. ProLiant Servers #1 and #2 |

Overview

ProLiant DL380 G3 F100/F200 Integrated Cluster Solutions and Non-Integrated Bundles

The ProLiant DL380 G3 F100 and F200 Integrated cluster solutions & Non-Integrated Cluster bundles for MSA1000 are a family of integrated cluster solutions designed to simplify the deployment of fibre channel cluster solutions. The solutions are integrated in a 22U rack in our world class factories. The bundles are delivered as separate parts on a shrink wrapped pallets to be integrated at the customer site by the customer or an HP field service engineer. Each product can be ordered with one part number.

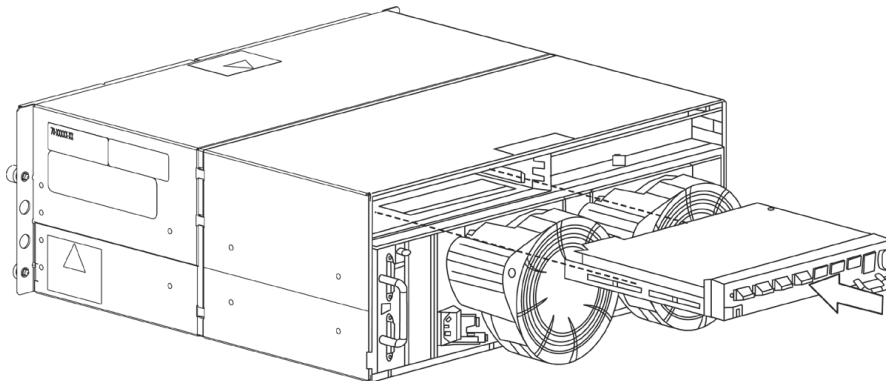
- Ideal for mail, Internet servers, file/print, IT Consolidation, and databases
- Uses standard Microsoft® clustering software, provided as part of the operating system (optional), to provide clustering functionality and failover (OS Not included with solution)
- Internal hardware components for server and storage already installed and cabled (Integrated Cluster Solutions only)
- Single path from servers to storage for cost effective availability (F100 Integrated Cluster Solutions and Non-Integrated Cluster Bundles only)
- Industry-leading HP installation and management functionality for lights-out management (optional) of your Integrated Cluster Solution and Non-Integrated Cluster Bundle
- Scalable architecture that can grow with your future needs
- Ability to upgrade an F100 Integrated Cluster Solutions or Non-Integrated Cluster to redundant paths (See ProLiant Cluster F200 for MSA1000 Upgrade Bundle) or purchase a redundant path F200 Integrated Solution or Non-Integrated Bundle
- All HP ProLiant Integrated Cluster Solutions or Non-Integrated Cluster Bundles come with ProLiant Clusters that offer detailed instructions on set-up and installation of clusters.

NOTE: The F200 solutions, bundles and upgrade bundles include two Secure Path V4.0 for Windows® Workgroup licenses.

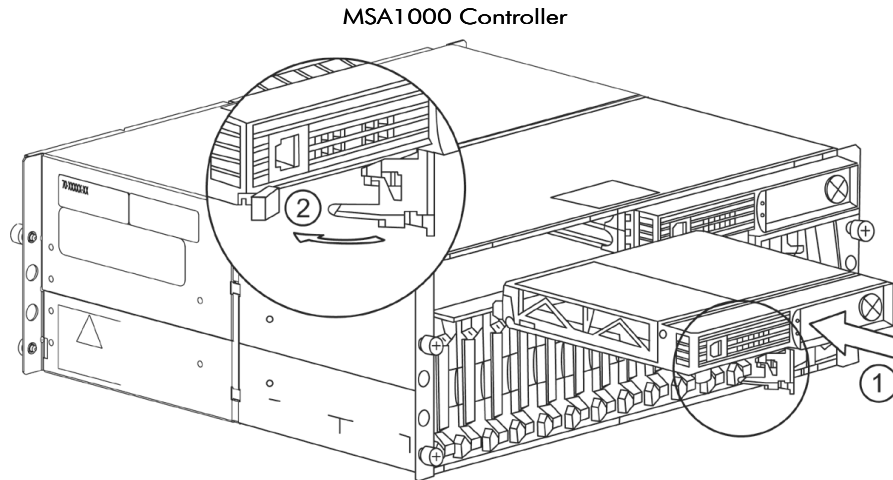
- HP offers services and support that can be tailored to meet customer's installation and set-up needs. Through our Configure to order process our customers can work with their account manager and solutions architects to have their cluster completely built with IP addresses set and customized images loaded in our factories.
- We have added these Integrated Cluster Solutions completely cabled in a 22U Rack and Non-integrated Bundles to our offerings to make the clustering experience less complex. Please see the solutions page on our Web site for more details:

<http://www.hp.com/servers/proliant/highavailability>.

MSA Hub 2/3 (Integrated)



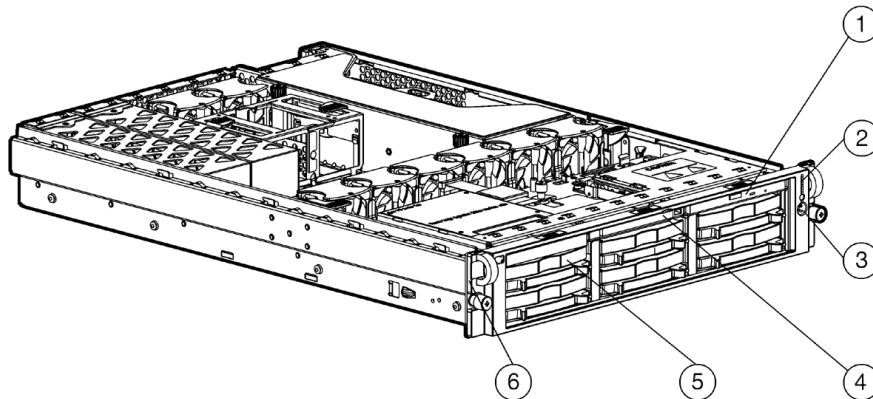
Overview



HP StorageWorks Modular SAN Array 1000

- High performance controller(s) built on DAS to SAN {DiS} architecture for maximum investment protection
- 4U rack mount design combining both the controller and disk shelf
- 2Gb/s Fibre Channel host connections
- Optional embedded 6-port 2Gb/s Fibre Channel fabric switch or 3-port 2Gb/s Fibre Channel hub
- Ultra3 SCSI connections to drives
- Support for HP Ultra2, Ultra3, and Ultra320 Universal 1" Drives
- Scaleable from 3 to 42 drives via StorageWorks 4200/4300 Enclosures
- Support for 1Gb/s and 2Gb/s Fibre Channel fabrics
- Multiple clusters and/or single server access by all supported OSes to an individual MSA1000

ProLiant DL380 G3 Server



- | | |
|---|---|
| <p>1. 24X Max CD-ROM (with easy front ejection removal)</p> <p>2. Front LEDs (show server status)</p> <p>3. Unit Identification button and LED (for easy in rack server identification)</p> | <p>5. 1.44 MB (3.5") Floppy Disk Drive</p> <p>6. Six 1" Wide Ultra3/Ultra320 SCSI hot plug hard drives and one AIT or 20/40-GB DAT hot plug tape drive</p> <p>7. 2U form factor</p> |
|---|---|

Overview

ProLiant DL380 G3 Server

- Integrated Lights-Out (iLO) Management standard on system board
- Intel® Xeon 2.80 GHz Processor (dual capability) with 512-KB level 2 ECC cache
- ServerWorks GC -LE Chipset
- Five Peer PCI Architecture with 400-MHz Front Side Bus
- 512-MB (expandable to 6GB) of 2-way interleaved capable PC2100 DDR SDRAM running at 200MHz, with Advanced ECC capabilities and Online Spare capabilities
- Integrated Smart Array 5i Plus Controller with optional Battery-Backed Write Cache (BBWC) Enabler option kit
- Three available 64-bit PCI-X slots, including two hot pluggable 100MHz slots and one 133MHz slot
- Two Compaq NC7781 PCI-X Gigabit NICs (embedded) 10/100/1000 WOL (Wake on LAN)
- Support for up to six 1" Wide Ultra3/Ultra320 SCSI hot plug hard drives or for five hot plug hard drives and one AIT hot plug tape drive
- Support for user configurable Simplex and Duplex
- Internal hot plug capacity 880.8 GB standard (6 x 146.8 GB 1" HD)
- 400-Watt Hot Plug Power Supply (with optional redundancy)
- Hot Pluggable Fans (with optional redundancy)
- Sliding rails and cable management arm for easy serviceability and in-rack tool-less access to major components
- Automatic Server Recovery (ASR), ROM Based Setup Utility (RBSU), Insight Manager 7, Status LEDs including system health and UID and SmartStart
- Protected by Compaq Services, including a three-year, Next Business Day, on-site limited Global warranty and extended Pre-Failure Warranty, which covers processors, memory, and hard drives – Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center at 1-800-345-1518 for details.

Standard Features

Models (DL380 G3 Cluster Solutions and Bundles)

ProLiant Cluster Kits	ProLiant DL380 G3 F100 Integrated Cluster Solution (Microsoft Windows NT® 4.0EE, Windows 2000 Advanced Server, or Windows Server 2003)	317645-001
	ProLiant DL380 G3 F200 Integrated Cluster Solution (Microsoft Windows NT 4.0EE, Windows 2000 Advanced Server, or Windows Server 2003)	321738-001
	ProLiant DL380 G3 F200 Non-Integrated Cluster Bundle (Microsoft Windows NT 4.0EE, Windows 2000 Advanced Server, or Windows Server 2003)	321494-001
	ProLiant Cluster F200 for MSA1000 Upgrade Bundle	317647-001

ProLiant DL380 G3 F100_F200 Integrated Cluster Solutions and Non-Integrated Bundles

The ProLiant Cluster Integrated Solutions and Non-Integrated Bundles provide high availability for applications and data in a business-critical environment. The ProLiant DL380 G3 F100 and F200 Integrated Solutions & Non-Integrated Bundles utilizes HP's industry-leading ProLiant server products, StorageWorks Modular SAN Array 1000, Ethernet interconnect and HP's leading installation and systems management utilities. The ProLiant DL380 G3 F100 Integrated Cluster Solutions & Non-Integrated Bundles for MSA1000 utilizes the industry-standard Microsoft Cluster Server software for cluster operation and management. The F100 solutions and bundles provides a single path connection between the ProLiant Servers and the MSA1000, with a fibre channel 3 port embedded mini-hub (StorageWorks MSA hub 2/3) creating an affordable entry-level fibre channel high availability configuration. The cluster kit, which HP offers with the ProLiant DL380 G3 F100 Integrated Cluster Solutions & Non-Integrated Bundles for MSA1000, contains documentation and a 10' Ethernet interconnect cable for heartbeat connection between server nodes.

The ProLiant DL380 G3 F200 Integrated Cluster solution for MSA1000 delivers a higher level of availability than the F100. The F200 also uses HP's industry-leading ProLiant servers, StorageWorks Modular SAN Array 1000, Ethernet server to server interconnect, and HP's industry of availability in clusters by enabling multi-path fibre channel connections. SANworks Secure Path management software by HP, included with the kit, features support for a redundant fibre channel infrastructure (two paths through the fibre channel three (3) port embedded mini-hub) utilizing dual Host-Bus-Adapters in each server connected to one MSA1000 storage subsystems, each with dual RAID controllers that creates a configuration with no single point of failure. HP also provides a cluster kit for the F200 solutions and bundles, which contains the software components that are required to connect two HP servers and HP Fibre Channel Storage systems together in a cluster, along with documentation and an interconnect cable.

HP StorageWorks Modular SAN Array 1000

The HP StorageWorks modular SAN array 1000 is the first generation 2Gb Fibre Channel storage system designed for the entry level to mid-range Storage Area Network (SAN). Designed to reduce the complexity, expense and risk of SAN deployment, the MSA1000 is a scaleable, high performance storage system built with investment protection in mind. The modular design of the MSA1000 allows the user to easily add storage capacity on an as needed basis.

The MSA1000 combines the array controller shelf and the drive shelf, which holds up to fourteen 1² universal disk drives in a single 4U rack mount cabinet. More storage can be easily deployed with the addition of up to two StorageWorks 4314 or 4214 Enclosures for a maximum storage capacity of 6TB when using the new 146GB drives. The MSA1000 provides the latest 2Gb Fibre Channel technology to the hosts. Besides the single port 2Gb Fibre Channel I/O module that comes standard, there is an optional 6-port, 2Gb Fibre Channel fabric switch that fits inside the MSA1000. A recent optional addition is a 3-port 2Gb Fibre Channel hub that also fits inside - an ideal low cost solution for simple 2-node clustering.

The MSA1000 provides Ultra3 SCSI connections to the hard drives and uses the HP Universal 1² Ultra2, Ultra3, and/or Ultra320 drives. By utilizing existing SCSI drives, the MSA1000 lowers the total cost of ownership and extends the customer's hardware investments into the future. The MSA1000 can be remotely managed by using management tools such as HP Insight Manager 7, Array Configuration Utility and the StorageWorks Fabric Switch Management Utility. Recent updates to the MSA1000's controller firmware offer support for NetWare and Linux operating systems along with the original support for for Microsoft Windows NT, Windows 2000, and Windows Server 2003. This updated firmware also supports multiple clusters and/or single servers accessing an MSA1000.

Service and Support, HP Care Pack and Warranty Information

Service and Support Offerings (HP Care Pack Services)

HP Care Pack Services listed here are available in North America only.

Windows 2000 Advanced Server Cluster Installation and Startup Service for ProLiant Servers

Customer Service Description 2-Node Cluster

FM-W2KA2-IN

248497-002

<http://services-im.inet.cpqcorp.net/ServiceMenu/packages/ww/CSD-Microsoft-W2K-Advanced-Server-Installation-and-Startup.doc>.

CSD 2, 2-Node Cluster Pairs

FM-W2KA4-IN

248498-002

<http://services-im.inet.cpqcorp.net/ServiceMenu/packages/ww/CSD-Microsoft-W2K-Advanced-Server-Installation-and-Startup.doc>.

Service Delivery Guide (instructions for service professionals who will perform the service):

<http://sdg.inet.cpqcorp.net/release/sdg/w2kascis/index.htm>.

HP.com web page:

http://www.compaq.com/services/carepack/us/install/cp_win2000.html#MMIS.

(NB: there is WNT cluster I&S service on the list). There is a link to buying instruction page (for NA at least) on the left nav bar.

2 node Cluster (ProLiant Server Only)

Windows 2000 Adv. Server Cluster Installation & Startup Service for ProLiant Servers CSD (One 2- node Cluster)

FM-W2KA2-IN

248497-002

Windows 2000 Adv. Server Cluster Installation & Startup Service for ProLiant Servers CSD (Two 2- node cluster pairs)

FM-W2KA4-IN

248498-002

HP StorageWorks modular SAN array 1000 installation & startup service

Customer Service Description (what are the deliverables) MSA1000 I&S - Core Service

QR-SMMSA-IS

263858-002

MSA1000 I&S - Redundancy Option (SecurePath)

QR-SMMSR-IS

305465-002

MSA1000 I&S - Subsys add-on (Add an extra MSA1000)

QR-SMMSS-IS

305464-002

<http://services-im.inet.cpqcorp.net/ServiceMenu/packages/ww/CSD-MSA1000.DOC>.

External Fibre Storage

MSA1000 I&S – Core Service

QR-SMMSA-IS

263858-002

MSA1000 I&S – Redundancy Option (SecurePath)

QR-SMMSR-IS

305465-002

MSA1000 I&S – Subsys add-on (Add an extra MSA1000)

QR-SMMSS-IS

305464-002

Solution/Bundle Contents

ProLiant DL380 G3 F100 Integrated Cluster Solution			
(Part Number: 317645-001)			
		Number of Units	Part Number
Servers	DL380R03 P2800-512KB, 512 MB	2	301111-001
	Intel Xeon 2.80 GHz-512KB Processor Option Kit	2 (1 Ea server)	257915-B21
	ProLiant Cluster HA/F100 for MSA1000	1	252408-B23
	MSA 1000 Fibre Channel Adapter (FCA) 2101	2 (1 Ea server)	245299-B21
	DL380 G3 Redundant Fan Option Kit	2 (1 Ea server)	293048-B21
	Hot Plug AC Redundant Power Supply Module (NEMA cord)	2 (1 Ea server)	313054-001
	ProLiant Essentials integrated Lights-Out (iLO) Advanced Pack	2 (1 Ea server)	263825-B21
	36.4GB 15,000 rpm, U320 Universal Hard Drive, 1"	4 (2 Ea server)	286776-B22
	HP StorageWorks modular SAN array 1000	1	201723-B22
External Storage	5 m LC-LC Multi-Mode Fibre Channel Cable	2	221692-B22
	HP StorageWorks MSA Hub 2/3	1	286763-B21
	HP StorageWorks MSA 1000 Fibre Channel Adapter (FCA) 2101	2 (1 Ea server)	245299-B21
Rack and Supported Rack Options	Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) NOTE: Part Number 252663-D71 ships with the US ProLiant DL380 G3 F100 Integrated Cluster Solution PN 317645-001.	2	252663-D71
	Server Console Switch 1 x 4-port (100 to 230 VAC)	1	400336-001
	CPU to Server Console Cable, 7'	2	110936-B25
	TFT5600 RKM Rack Keyboard Monitor	1	221546-001
	Rack Blanking Panels – Graphite (Multi)	1	253214-B26
	Cable Spool	2	70-40853-03
	HP Rack 10622 (22U) – Shock Pallet	1	245163-B22

ProLiant Cluster F200 for MSA1000 Upgrade Bundle			
(Part Number: 317647-001)			
(For ProLiant DL580 G2, DL380 G3, & DL360 G3 F100 Integrated Cluster Solution Only)			
		Number of Units	Part Number
F200 Optional Upgrade	ProLiant Cluster HA/F200 for MSA1000	1	252409-B23
	MSA 1000 Fibre Channel Adapter (FCA) 2101	2	245299-B21
	HP StorageWorks MSA Hub 2/3	1	286763-B21
	2m LC-LC Multi-Mode Fibre Channel Cable	2	221692-B22
	2Gb/s SFP Fibre Channel Transceiver Kit (used on switches with SFP ports)	1	221470-B21
	msa1000 Controller, with 256MB cache	1	218231-B21

Solution/Bundle Contents

ProLiant DL380 G3 F200 Integrated Cluster Solution			
(Part Number: 321738-001)			
ProLiant DL380 G3 F200 Non-Integrated Cluster Bundle			
(Part Number: 321495-001)			
		Number of Units	Part Number
Servers	DL380R03 P2800-512KB, 512 MB	2	301111-001
	Intel Xeon 2.80 GHz-512KB Processor Option Kit	2 (1 Ea server)	257915-B21
	MSA 1000 Fibre Channel Adapter (FCA) 2101	1	245299-B21
	ProLiant Cluster HA/F200 Kit for MSA1000	2 (1 Ea server)	252409-B23
	DL380 G3 Redundant Fan Option Kit	2 (1 Ea server)	293048-B21
	Hot Plug AC Redundant Power Supply Module (NEMA cord)	2 (1 Ea server)	313054-001
	ProLiant Essentials integrated Lights-Out (iLO) Advanced Pack	2 (1 Ea server)	263825-B21
	36.4GB 15,000 rpm, U320 Universal Hard Drive, 1"	4 (2 Ea server)	286776-B22
External Storage	HP StorageWorks modular SAN array 1000	1	201723-B22
	msa1000 Controller, with 256MB cache	1	218231-B22
	2m LC-LC Multi-Mode Fibre Channel Cable	4	221692-B22
	2Gb/s SFP Fibre Channel Transceiver Kit (used on switches with SFP ports)	1	221470-B21
	HP StorageWorks MSA Hub 2/3	2	286763-B21
Rack and Supported Rack Options	NOTE: NO Racks or Supported Rack Options are included with the ProLiant DL380 G3 F200 Non-Integrated Cluster Bundles (Part Number: 321495-001).		
	Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) NOTE: Part Number 252663-D71 ships with the US ProLiant DL380 G3 F200 Integrated Cluster Solution PN 321738-001).	2	252663-D71
	Server Console Switch 1 x 4-port (100 to 230 VAC)	1	400336-001
	CPU to Server Console Cable, 7'	2	110936-B25
	TFT5600 RKM Rack Keyboard Monitor	1	221546-001
	Rack Blanking Panels – Graphite (Multi)	1	253214-B26
	Cable Spool	2	70-40853-03
	HP Rack 10622 (22U) – Shock Pallet	1	245163-B22

© Copyright 2003 Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice.

Microsoft and Windows NT are US registered trademarks of Microsoft Corporation. Intel is a US registered trademark of Intel Corporation.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.